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# 7 Quality Control Plan

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## **The Quality Control Plan**

*Development*

*Details*

*Addenda*

*Operational Types*

## **QCP Annex**

## **Quality Control Plan Checklist**

# CHAPTER SEVEN:

## *QUALITY CONTROL PLAN*

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If a single part of the Certified Aggregate Producer Program is considered to be the most important, then that is the Quality Control Plan (QCP). The QCP is required to encompass the total process from preliminary site approval up to the point where the material leaves the Producer's control. The QCP is required to identify and address all products generated and the type, frequency, and limits of sampling and testing to be done. The QCP focuses on a quality product and answers the questions of who, what, when, where, and how.

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### QUALITY CONTROL PLAN

#### *DEVELOPMENT*

The QCP is developed while the Producer is in the Coordinated Testing Phase. When starting to develop the QCP, the Producer is required to refer to this chapter, the model QCP's (Appendix C), INDOT's preliminary site approval letter, the CAP Program (**ITM 211**), and Section **917**.

The QCP is site and plant specific. A QCP for one site would not necessarily be satisfactory for another site.

#### *DETAILS*

The following list is provided to assist in the preparation of a QCP; however, the list is not to be considered all-inclusive. A QCP is required to include:

1. The location and physical description of the site
2. Management Representative and Certified Technician(s) and their CAPP duties and responsibilities
3. A list and description of all portions of the mineral deposit as well as the manner in which each quality class is to be handled
4. A statement regarding AP aggregates. The AP Aggregate Production Control Plan may be included in an Appendix.

5. A statement regarding leachate testing for air cooled blast furnace slag. The requirements are listed in ITM 212.
6. A statement regarding bulk specific gravity testing for steel furnace slag when this material is used in stone mastic asphalt.
7. A statement regarding sampling and testing of natural sand fine aggregate when composite stockpiling multiple sources into one stockpile is done.
8. Identification of and a plan for handling materials having marginal quality characteristics
9. A list of all products produced at the plant. A CAPP category shall be identified for each of the products. This list could also be an appropriate place to identify those products for which no controls or limits are appropriate
10. A generic production flow diagram
11. A sampling plan that includes locations, devices, techniques, frequencies, and test methods
12. A testing plan that includes the types of tests and test methods, and the means to isolate material represented by nonconforming tests
13. A list of the target mean values, standard deviations, and control limits on the critical sieves for each material controlled by critical sieve requirements
14. A description of other process control techniques that are used beyond the minimum required
15. A plan for downstream controls that includes identification of stockpiles by signing, construction of stockpiles, and material retrieval
16. A statement of laboratory capability including the location of the lab, a list of equipment that is verified, and the test methods and frequency of verification

17. A documentation plan with details on control charting, test data, and the diary, etc.
18. The method by which the frequency of production and load-out testing of Certified Materials is verified
19. The location of the reference documents, control charts, diary, test data, material shipment records, and other pertinent information
20. The method of control for each Producer Yard
21. The procedure for handling addenda
22. The Annual Aggregate Source Report in an Appendix
23. An Appendix. As a minimum the Appendix is required to contain an Addenda Summary Sheet
24. Authentication and approval (two signatures required)

A QCP checklist is provided to assure that all the applicable items required in **ITM 211** are addressed in the QCP.

#### ***ADDENDA***

Addenda are defined as any addition or deletion to the QCP. Each page of the QCP that is revised is required to include the source number, date of revision, and means of identifying the revision. The addenda are required to include a signed and dated authentication page.

Revisions for Certified Material additions, Certified Material deletions, target mean and control limit values, or Certified Aggregate Technicians are submitted in the format of the QCP Annex as they occur. Upon approval by the District Testing Engineer, the QCP Annex is placed in the Appendix of the QCP until such time that the revisions are incorporated into the QCP.

Revisions, other than items on the QCP Annex, are maintained on an Addenda Summary Sheet. The Addenda Summary Sheet is a page of the QCP Appendix that is used to record a brief description of the revision until such time that the revision is incorporated into the QCP.

Addenda may be submitted at the audit close-out meeting or between January 1st and April 1st of each calendar year. The addenda are required to include items on the QCP Annex, items on the Addenda Summary Sheet, and any other necessary revisions at the time of submittal. Upon incorporation into the QCP as addenda, the QCP Annex and items on the Addenda Summary Sheet are required to be removed from the QCP Appendix.

#### ***OPERATIONAL TYPES***

The CAPP provides for Plants and Redistribution Terminals. The QCP is required to identify the intended type of operation. In some instances a primary source may also sell material produced at another source and therefore would be operating as both a Plant and a Redistribution Terminal.